

Application No. 10/601,701

**IN THE DRAWINGS:**

Enclosed is a new formal drawing of Figure 5, accompanied by a Letter to the Official Draftsperson. Figure 5 was amended to add reference numeral --3--.

## **REMARKS**

### **Claim Rejections**

Claims 8-14 are rejected under 35 U.S.C. § 112, second paragraph. Claims 8-14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kato et al. (U.S. 5,589,406) in view of Hasegawa (U.S. 2004/0026738).

### **Amendments to Specification**

Applicant has amended the substitute Specification as noted above to cure obvious grammatical and idiomatic inaccuracies and to clarify that the amorphous silicon film (3) is the active layer. It is believed that the foregoing amendments to the Specification overcome the outstanding objections thereto. No "new matter" has been added to the original disclosure by the foregoing amendments to the Specification.

### **Drawings**

Applicant has amended Fig. 5, as illustrated on the attached formal drawing, accompanied by a LETTER TO THE OFFICIAL DRAFTSPERSON. Figure 5 was amended to add reference numeral --3--. No "new matter" has been added to the original disclosure by the amendment to this figure. It is believed the foregoing proposed amendment obviates the outstanding objections to the drawings. Entry of the corrected drawing is respectfully requested.

### **Claim Amendments**

By this Amendment, Applicant has amended claim 8 of this application. It is believed that the amended claims specifically set forth each element of Applicant's invention in full compliance with 35 U.S.C. § 112, and define subject matter that is patentably distinguishable over the cited prior art, taken individually or in combination.

The primary reference to Kato et al. teaches a method of making a TFT display. Kato et al. teaches a TFT circuit design issue, whereas the present invention teaches manufacturing a low temperature polycrystalline silicon TFT. The Si islands

(3, 30) of Kato et al. solve a circuit design issue on the bone form. However, in Figure 6 of the present invention the si island is made of amorphous silicon, and then the present invention utilizes laser re-crystallization to transform the spacer into polycrystalline silicon.

Kato et al. do not teach the first amorphous silicon film being an active layer; nor do Kato et al. teach recrystallizing the active layer as a polycrystalline silicon.

The secondary reference to Hasegawa teaches a semiconductor device. The present invention is focused on laser re-crystallization of amorphous silicon. However, the side spacer of Hasegawa is made of polycrystalline silicon formed on sidewalls of step portions of the island-like silicon active layer, buried insulation film, and semiconductor support substrate. In Hasegawa, the side spacer does not any concern laser re-crystallization for amorphous silicon.

In Hasegawa, the side spacers are formed on the down sidewalls of step portions of the island-like silicon active layer. In the present invention, the spacers are formed on the up sidewalls of active layer.

The active island of Hasegawa is a polycrystalline silicon, but the active layer of present invention made of amorphous silicon that is converted by laser re-crystallization into polycrystalline silicon. The side spacer of Hasegawa has a contact hole on the side of active island (202) (See Figure 2, page2), but the spacer of present invention does not use a contact hole on the side of active island.

Hasegawa does not teach the first amorphous silicon film being an active layer; nor does Hasegawa teach recrystallizing the active layer as a polycrystalline silicon.

Even if the teachings of Kato et al. and Hasegawa were combined, as suggested by the Examiner, the resultant combination does not suggest: the first amorphous silicon film being an active layer; nor does the combination suggest recrystallizing the active layer as a polycrystalline silicon.

It is a basic principle of U.S. patent law that it is improper to arbitrarily pick and choose prior art patents and combine selected portions of the selected patents on the basis of Applicant's disclosure to create a hypothetical combination which allegedly renders a claim obvious, unless there is some direction in the selected prior art patents to combine the selected teachings in a manner so as to negate the patentability of the claimed subject matter. This principle was enunciated over

40 years ago by the Court of Customs and Patent Appeals in In re Rothermel and Waddell, 125 USPQ 328 (CCPA 1960) wherein the court stated, at page 331:

The examiner and the board in rejecting the appealed claims did so by what appears to us to be a piecemeal reconstruction of the prior art patents in the light of appellants' disclosure. ... It is easy now to attribute to this prior art the knowledge which was first made available by appellants and then to assume that it would have been obvious to one having the ordinary skill in the art to make these suggested reconstructions. While such a reconstruction of the art may be an alluring way to rationalize a rejection of the claims, it is not the type of rejection which the statute authorizes.

The same conclusion was later reached by the Court of Appeals for the Federal Circuit in Orthopedic Equipment Company Inc. v. United States, 217 USPQ 193 (Fed.Cir. 1983). In that decision, the court stated, at page 199:

As has been previously explained, the available art shows each of the elements of the claims in suit. Armed with this information, would it then be non-obvious to this person of ordinary skill in the art to coordinate these elements in the same manner as the claims in suit? The difficulty which attaches to all honest attempts to answer this question can be attributed to the strong temptation to rely on hindsight while undertaking this evaluation. It is wrong to use the patent in suit as a guide through the maze of prior art references, combining the right references in the right way so as to achieve the result of the claims in suit. Monday morning quarterbacking is quite improper when resolving the question of non-obviousness in a court of law.

In In re Geiger, 2 USPQ2d, 1276 (Fed.Cir. 1987) the court stated, at page 1278:

We agree with appellant that the PTO has failed to establish a *prima facie* case of obviousness. Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching suggestion or incentive supporting the combination.

Applicant submits that there is not the slightest suggestion in either Kato et al. or Hasegawa that their respective teachings may be combined as suggested by the Examiner. Case law is clear that, absent any such teaching or suggestion in the prior art, such a combination cannot be made under 35 U.S.C. § 103.

Neither Kato et al. nor Hasegawa disclose, or suggest a modification of their specifically disclosed structures that would lead one having ordinary skill in the art to arrive at Applicant's claimed structure. Applicant hereby respectfully submits that no combination of the cited prior art renders obvious Applicant's new claims.

**Summary**


In view of the foregoing, Applicant submits that this application is now in condition for allowance and such action is respectfully requested. Should the Examiner not be of the opinion that this case is in condition for allowance, it is requested that this amendment be entered for the purposes of appeal.

Should any points remain in issue, which the Examiner feels could best be resolved by either a personal or a telephone interview, it is urged that Applicant's local attorney be contacted at the exchange listed below.

Respectfully submitted,

Date: October 24, 2005

By: \_\_\_\_\_

  
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